



# What is the Emergency Watershed Protection Program?

- The purpose of the Emergency Watershed Protection Program (EWPP) is to undertake emergency measures to safeguard lives and property from floods, drought, and the products of erosion on any watershed whenever a fire, flood, or any other natural occurrence has caused a sudden impairment of the watershed
- The program is designed for implementation of recovery measures
- EWPP Policy and Procedures are available on NRCS website (see Fact Sheet for web address)



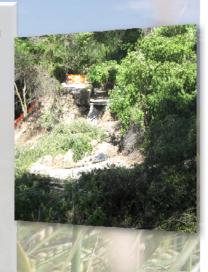
### Why is NEPA Necessary?

- Any federal action (including funding and permitting) that might result in effects on the natural or built environment is subject to evaluation under the National Environmental Policy Act (NEPA)
- NEPA requires lead agencies to evaluate a reasonable range of alternatives even if they are different from what might have been presented in a previous study
- NEPA requires NRCS to evaluate a "No-Action" alternative



#### **No-Action Alternative**

- NEPA requires NRCS to study a No-Action Alternative
- NRCS would not distribute funding to repair the Logan Northern (LN) Canal
- Would not address the existing landslide area along Canyon Road in Logan
- Would not restore delivery of LN Canal irrigation water to shareholders downstream of about 1200 East (a point called the *Laub Diversion*)





## **Purple Alternative (Preferred) - Description**

- Modify LHPS point of diversion (POD) structure
- Reconstruct the LHPS Canal as a box culvert from the LHPS Canal POD to Lundstrom Park
- Divert the LN Canal shares from Lundstrom Park into a pipeline under city streets and discharge into the existing LN Canal at about 1500 North
- Put some water in a pressurized pipeline in existing canal maintenance road for delivery to users between about 400 North and 1500 North
- End box culvert at Lundstrom Park; LHPS Canal shares would continue to flow in the existing LHPS Canal
- Construct a 6-inch pipeline in the existing LN Canal to deliver water to LN Canal shareholders between the LN Canal POD and the Laub Diversion
- Remove structures from 14 properties along Canyon Road

Cost: \$20.4 to \$22.4 Million

Miles of Box Culvert: 2.4 in LHPS Canal

Miles of Pipeline: 3.2 total (2.0 miles of LN Canal, 1.2 miles between canals)





# **Purple Alternative (Preferred) - Impacts**

- Summary of Long-Term Impacts (see Draft EIS for a complete list)
  - Permanent easements from about 2.6 acres
  - Remove structures from properties and convert from residential to use-restricted undeveloped land; would also reduce risk to life and property from future instability of Logan Bluff
  - Loss of non-authorized recreational use of 2.4 miles of the LHPS Canal
  - Permanent loss of 0.3 acre of irrigated farmland
  - Permanent loss of riparian vegetation at LHPS Canal POD
  - Removing and/or modifying canal structures would affect resources that might be eligible for listing on the National Register of Historic Places (NRHP)
  - Potential improvement of irrigation water quality due to separating stormwater from irrigation water in 0.8 mile of the LHPS Canal and about 2 miles of the LN Canal
  - Increase LN Canal stormwater capacity between the POD and the Laub Diversion and between 400 North and 1500 North
  - 7,400 acre-feet of irrigation water would no longer be lost to seepage, resulting in a reduction in annual groundwater recharge; 7,400 acre-feet of water conserved as a result
- Summary of Construction Impacts (see Draft EIS for a complete list)
  - 151 construction easements needed
  - Short-term construction-related effects: noise, dust, and traffic disruptions
  - Short-term benefit to local economy during construction
  - Could disrupt irrigation to LHPS Canal users between LHPS Canal POD and Lundstrom Park and to LN Canal users between the LN Canal POD and Laub Diversion if construction occurs during irrigation season



## **Orange Alternative - Description**

- Modify LHPS POD structure
- Reconstruct the LHPS Canal as a box culvert between the POD and either 2900 North or 3100 North in North Logan
- Divert the LN Canal shares from the box culvert in North Logan into a pipeline underground and discharge to the existing LN Canal at 2900 North/3100 North
- End box culvert at 2900 North/3100 North; LHPS Canal shares would continue to flow in the existing LHPS Canal
- Put some water in a pressurized pipeline in existing LN Canal maintenance road for delivery to users between about 400 North and 2900 North/3100 North
- Construct a 6-inch pipeline in the existing LN Canal to deliver water to LN Canal shareholders between the LN Canal POD and the Laub Diversion
- Remove structures from 14 properties along Canyon Road

Cost: \$39.5 to \$43.4 Million

Miles of Box Culvert: 4.9 (to 2900 North) or 5.1 (to 3100 North) Miles of Pipeline: 4.6 to 5.1 total (4.1 to 4.5 miles of LN Canal, 0.5 to 0.6 mile

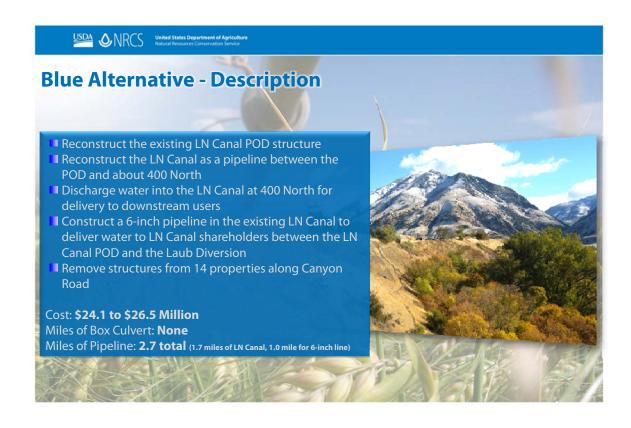
between canals)

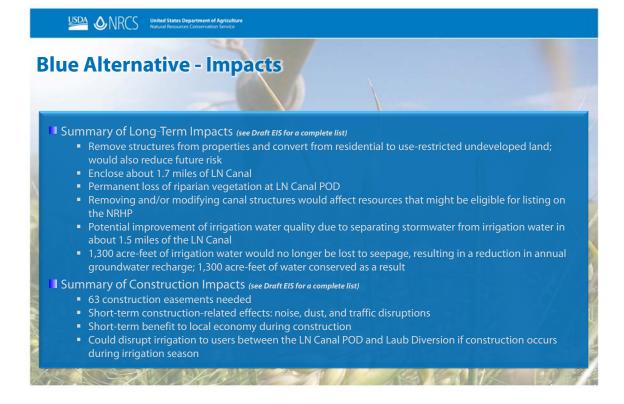




#### **Orange Alternative - Impacts**

- Summary of Long-Term Impacts (see Draft EIS for a complete list)
  - Permanent easements from about 3.6 acres
  - Remove structures from properties and convert from residential to use-restricted undeveloped land; would also reduce risk to life and property from future instability of Logan Bluff
  - Loss of non-authorized recreational use of 4.9 to 5.1 miles of the LHPS Canal
  - Permanent loss of 0.3 acre of irrigated farmland
  - Permanent loss of riparian vegetation at LHPS Canal POD
  - Removing and/or modifying canal structures would affect resources that might be eligible for listing on the
  - Potential improvement of irrigation water quality due to separating stormwater from irrigation water in about 3.3 to 3.5 miles of the LHPS Canal and about 4.1 to 4.5 miles of the LN Canal
  - Increase LN Canal stormwater capacity between the POD and the Laub Diversion and between 400 North and either 2900 North or 3100 North
  - 13,000 acre-feet of irrigation water would no longer be lost to seepage, resulting in a reduction in annual groundwater recharge; 13,000 acre-feet of water conserved as a result
- Summary of Construction Impacts (see Draft EIS for a complete list)
  - 354 construction easements needed
  - Short-term construction-related effects: noise, dust, and traffic disruptions
  - Short-term benefit to local economy during construction
  - Could disrupt irrigation to LHPS Canal users between the LHPS Canal POD and 2900 North/3100 North and to LN canal users between the LN Canal POD and Laub Diversion if construction occurs during irrigation season







### **Other Alternatives Considered but Eliminated**

#### **Yellow Alternative**

- Modify existing LN Canal POD structure
- Install a new pipeline under Canyon Road to 400 North
- Discharge LN Canal water back into the existing canal at about 400 North/600 East

This alternative was not carried forward because it would not provide substantial benefits over the other alternatives. When compared to the Blue Alternative, the Yellow Alternative is in the same general area, would use the same POD, would cost about the same amount, and would deliver water to the same location. Furthermore, the Yellow Alternative would cause substantial construction-related effects to people living along Canyon Road.

#### **Green Alternative**

- Modify the LHPS Canal POD structure
- Carry LN Canal and LHPS Canal water in a box culvert installed in the LHPS Canal to the Logan Golf & Country Club
- Carry the LN Canal water west to the existing LN Canal through the Logan Golf & Country Club and under US 89 using an underground pipeline
- Discharge LN Canal water back into the existing canal at about 400 North/600 East

This alternative was not carried forward because it would not provide benefits over the other alternatives. The Green Alternative would require major construction on US 89, a state and federal scenic highway and only western access for the Logan Canyon and USFS land in the area.

